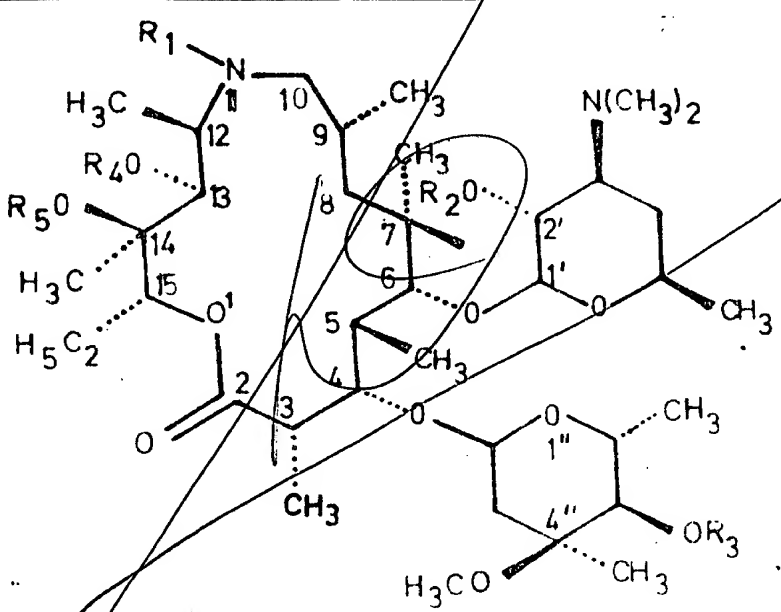
WHAT IS CLAIMED IS:

1. New erythromycin A compounds of the formula



(1)

wherein R_1 stands for methyl, whereas R_2, R_3, R_4 and R_5, which may have equal or different meanings, stand for hydrogen atoms, C_1-C_3-alkanoyl groups or R_4 and R_5 together form a >C=O group.

2. N-methyl-11-aza-10-deoxo-10-dihydro erythromycin A.

3. 2'-acetyl-N-methyl-11-aza-10-deoxo-10-dihydro erythromycin A.

4. 2',4"-diacetyl-N-methyl-11-aza-10-deoxo-10-dihydro erythromycin A.

5. 2'-propionyl-N-methyl-11-aza-10-deoxo-10-dihydro erythromycin A.

6. 2',4"-dipropionyl-N-methyl-11-aza-10-deoxo-10-dihydro erythromycin A.

7. N-methyl-11-aza-10-deoxo-10-dihydro erythromycin A 13,14-cyclic carbonate.

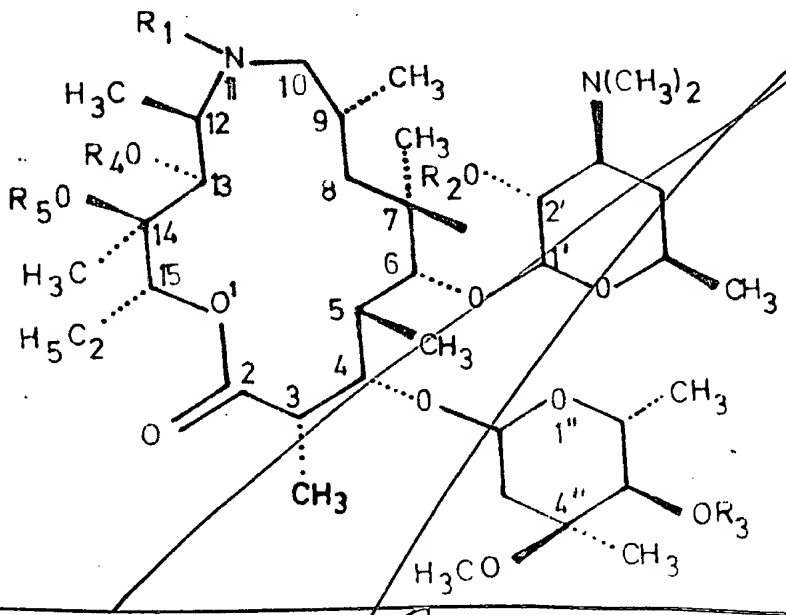
8. 2'-acetyl-N-methyl-11-aza-10-deoxo-10-dihydro erythromycin A 13,14-cyclic carbonate.

9. 2',4"-diacetyl-N-methyl-11-aza-deoxo-10-dihydro erythromycin A 13,14-cyclic carbonate.

10. 2'-propionyl-N-methyl-11-aza-10-deoxo-10-dihydro erythromycin A 13,14-cyclic carbonate.

11. 2',4"-dipropionyl-N-methyl-11-aza-10-deoxo-10-dihydro erythromycin A 13,14-cyclic carbonate.

12. A process of manufacture of erythromycin A compounds of the general formula



(1)

wherein R_1 stands for methyl, whereas R_2, R_3, R_4 and R_5, which may have equal or different meanings, stand for hydrogen atoms, C_1-C_3-alkanoyl groups or R_4 and R_5 together form a $>C=O$ group,
which comprises

a) reacting 11-aza-10-deoxo-10-dihydro erythromycin A of the above formula (1), wherein R_1, R_2, R_3, R_4 and R_5 are identical and stand for hydrogen atoms, with formaldehyde,

b) reacting the obtained product of the formula (1), wherein R_1 stands for methyl and R_2, R_3, R_4 and R_5 all stand for hydrogen atoms, with ethylene carbonate, and

c) subjecting the products, obtained in the above steps a) and b), to acylation with carboxylic acid anhydrides of the formula

$$R_6 - O - R_7 \qquad (2)$$

wherein R_6 and R_7 correspond to the meanings of R_2 and R_3 resp. or R_4 and R_5 resp., with the provision that they stand for C_1-C_3 alkanoyl groups.

13. A process as claimed in claim 12, wherein the step a) is carried out with a 1-3 molar excess of formaldehyde and formic acid in an inert organic solvent.

14. A process as claimed in claim 12, wherein the step a) is carried out at about reflux temperature.

15. A process as claimed in claim 13, wherein the solvent is chloroform or carbon tetrachloride.

16. A process as claimed in claim 12, wherein the step b) is performed with a 1-6 molar excess of ethylene carbonate in the presence of an alkali and of an inert organic solvent.

17. A process as claimed in claim 12, wherein the step b) is performed at a temperature of about 60° to 80°C.

18. A process as claimed in claim 16, wherein the solvent is benzene or ethyl acetate.

19. A process as claimed in claim 16, wherein the alkali is K_2CO_3.

20. A process as claimed in claim 12, wherein the step c) is performed at a temperature of about ambient temperature to about 80°C.

21. A process as claimed in claim 12, wherein the step c) is carried out in pyridine.

22. A method for controlling bacteria by applying new erythromycin A compounds of the general formula (1).